Amendments to the Claims

This listing of claims will replace all prior versions, and listing of claims in the application:

Listing of Claims

1. (Currently Amended) A process for manufacturing a silicoaluminophosphate crystalline molecular sieve of pure LEV or CHA structure comprising particles having a mean particle size of at most 400 nm, the process comprising the steps of: (a) providing sources of aluminium, of phosphorus and of silicon, wherein the source of silicon is in solution with a water-miscible organic base; (b) forming a synthesis mixture from said sources; and (c) treating the synthesis mixture for a period of time and at a temperature sufficient to form the silicoaluminophosphate crystalline molecular sieve.

2. (Original) The process of claim 1, wherein the source of silicon is in solution in a water-miscible liquid organic base or an aqueous solution of a solid organic base.

3. (Original) The process of claim 2 wherein the water-miscible liquid organic base is in an admixture with water.

4. (Original) The process of claim 2 wherein the water-miscible liquid organic base functions as a structure-directing agent.

5. (Original) The process of claim 4 wherein the structure-directing agent is tetraethylammonium hydroxide (TEAOH).

6. (Original) The process of claim 4 wherein the structure-directing agent is a combination of tetraethylammonium hydroxide and dipropylamine.

7. (Original) The process of claim 1, wherein at least part of the process is carried out with agitation of the synthesis mixture.

8. (Original) The process of claim 1 wherein the silicoaluminophosphate crystalline molecular sieve is SAPO-34.

9. (Original) The process of claim 1 wherein the source of silicon comprises an inorganic silicon compound.

10. (Original) The process of claim 9 wherein the inorganic silicon compound is a colloidal silica.

11. (Cancelled)

12. (Original) The process of claim 1 wherein the silicoaluminophosphate crystalline molecular sieve is subjected to the step(s) of one or more of the group consisting of: washing, cation exchange and calcining.

13. (Previously presented) A molecular sieve produced by the process of claim 1.

14. (Cancelled)

15. (Previously presented) A process for manufacturing a pure SAPO-34, the process comprising the steps of: (a) providing a source of aluminium and a source of phosphorus, (b) combining a source of silicon with a water-miscible liquid organic base or an aqueous solution of a solid organic base in an amount sufficient to form a SAPO-34 having a mean particle size of at most 400nm; (c) forming a synthesis mixture from the combination of said sources in steps (a) and (b); and (d) subjecting the synthesis mixture to hydrothermal treatment.

16. (Previously presented) A calcined crystalline silicoaluminophosphate molecular sieve comprising crystals, wherein at least 50% of the crystals by number are smaller than 100 nm.

17. (Previously presented) The molecular sieve of claim 16, wherein at least 50% of the crystals by number are smaller than 50 nm.

18. (Previously presented) The molecular sieve of claim 16, wherein at least 90% of the crystals by number are smaller than 100 nm.

19. (Cancelled)

20. (Currently amended) The process of claim 1, ~~19,~~ wherein the mean particle size is at most 200 nm.

21. (Currently amended) The process of claim ~~19~~ 20,wherein the mean particle size is at most 100 nm.

22. (Currently amended) The process of claim ~~19~~ 21, wherein the mean particle size is at most 50 nm.

23. (Previously presented) The process of claim 1, wherein the silicoaluminophosphate molecular sieve comprises crystals, wherein at least 50% of the crystals by number are smaller than 100 nm.

24. (Previously presented) The process of claim 23, wherein at least 50% of the crystals by number are smaller than 50 nm.

25. (Previously presented) The process of claim 23, wherein at least 90% of the crystals by number are smaller than 100 nm.

26. (Previously presented) A process for manufacturing a silicoaluminophosphate crystalline molecular sieve, the process comprising the steps of: (a) providing sources of aluminium, of phosphorus and of silicon, wherein the source of silicon is in solution with a water-miscible organic base; (b) forming a synthesis mixture from said sources; and (c) treating the synthesis mixture for a period of time and at a temperature sufficient to form the silicoaluminophosphate crystalline molecular sieve, wherein at least 50% of the silicoaluminophosphate crystalline molecular sieve particles are smaller than 100 nm.

27. (Previously presented) The process of claim 2 wherein the water-miscible liquid organic base functions as a structure-directing agent.

28. (Previously presented) The process of claim 27 wherein the structure-directing agent is tetraethylammonium hydroxide (TEAOH).

29. (Previously presented) The process of claim 27 wherein the structure-directing agent is a combination of tetraethylammonium hydroxide and dipropylamine.

30. (Previously presented) The process of claim 26, wherein at least part of the process is carried out with agitation of the synthesis mixture.

31. (Previously presented) The process of claim 26, wherein the silicoaluminophosphate crystalline molecular sieve is SAPO-34.

32. (Previously presented) The process of claim 26, wherein at least 50% of the particles by number are smaller than 50 nm.

33. (Previously presented) The process of claim 26, wherein at least 90% of the crystals by number are smaller than 100 nm.

34. (Previously presented) A process for manufacturing a silicoaluminophosphate crystalline molecular sieve, the process comprising the steps of: (a) dissolving a source of silicon by heating in a water-miscible organic base; (b) providing sources of aluminium and of phosphorus; (c) forming a synthesis mixture from said sources; and (d) treating the synthesis mixture for a period of time and at a temperature sufficient to form the silicoaluminophosphate crystalline molecular sieve.

35. (Previously presented) The process of claim 34, wherein the water-miscible liquid organic base functions as a structure-directing agent.

36. (Previously presented) The process of claim 35, wherein the structure-directing agent is tetraethylammonium hydroxide (TEAOH).

37. (Previously presented) The process of claim 35, wherein the structure-directing agent is a combination of tetraethylammonium hydroxide and dipropylamine.

38. (Previously presented) The process of claim 34, wherein at least part of the process is carried out with agitation of the synthesis mixture.

39. (Previously presented) The process of claim 34, wherein the silicoaluminophosphate crystalline molecular sieve is SAPO-34.

40. (Previously presented) The process of claim 34, wherein the silicoaluminophosphate crystalline molecular sieve comprises particles having a mean particle size of at most 400 nm.

41. (Previously presented) The process of claim 40, wherein the mean particle size is at most 200 nm.

42. (Previously presented) The process of claim 40, wherein the mean particle size is at most 100 nm.

43. (Previously presented) The process of claim 40, wherein the mean particle size is at most 50 nm.

44. (Previously presented) The process of claim 34, wherein the silicoaluminophosphate molecular sieve comprises crystals, wherein at least 50% of the crystals by number are smaller than 100 nm.

45. (Previously presented) The process of claim 44, wherein at least 50% of the crystals by number are smaller than 50 nm.

46. (Previously presented) The process of claim 44, wherein at least 90% of the crystals by number are smaller than 100 nm.